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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,669	01/28/2002	Merle L. Keller	907A.0120.U1(US)	3840
29683	7590	08/05/2005	EXAMINER	
HARRINGTON & SMITH, LLP 4 RESEARCH DRIVE SHELTON, CT 06484-6212			PERILLA, JASON M	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/058,669

Applicant(s)

KELLER ET AL.

Examiner

Jason M. Perilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8, 10 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 1-7, 9, 11-24 and 30-48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-48 are pending in the instant application.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on January 28, 2002 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Drawings***

3. The drawings are objected to because figure 1 should be appropriately marked with text labels. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. Claims 1-48 are objected to because of the following informalities:

Regarding claim 1, in line 34, "the composite PN code" should be replaced by --a composite PN code--.

Regarding claim 3, in line 2, the acronym "MAND" should be defined in the claim to be definite.

Regarding claim 4, in line 2, the acronym, "MAJ" should be defined in the claim to be definite.

Regarding claim 13, in line 8, "three PN component codes" should be replaced by --three transmit PN component codes--, in line 15, "a PN composite code" should be replaced by --a transmit PN composite code--, in line 25, "PN composite coding" should be replaced by --transmit PN composite coding--, in line 26, "the second counter count" is lacking antecedent basis, in line 27, "the PN composite" should be replaced by --the transmit PN composite--, in line 28, "the PN composite" should be replaced by --the transmit PN composite coded--, in line 32, "the transmitted signal" should be replaced by --the received signal--, in line 35, "receiver" should be replaced by --receive--, and, in line 36, "transmitter" should be replaced by --transmit--.

Regarding claim 14, in line 2, "further" should be stricken

Regarding claim 15, in line 2, "three PN component" should be replaced by --three transmit PN component--.

Regarding claim 16, in line 2, "at least three PN component codes further" should be replaced by --at least three transmit PN component codes--, and, in line 3, "four PN component codes" should be replaced by --four transmit PN component codes--.

Regarding claim 17, in line 2, "four PN component codes further" should be replaced by --four transmit PN component codes--, in line 3, "MAND" should be defined in the claim, and in line 4, the variables X, Y, Z<sub>1</sub>, and Z<sub>2</sub> should be defined in the claim.

Regarding claim 18, in line 2, "four PN component codes further" should be replaced by --four transmit PN component codes--, in line 3, "MAJ" should be defined in the claim, and in line 4, the variables X, Y, Z<sub>1</sub>, and Z<sub>2</sub> should be defined in the claim.

Regarding claim 19, in line 2, "source further comprises" should be replaced by --source comprises--, and, in line 3, "oscillator" should be replaced by --oscillatory--.

Regarding claims 20-22, in line 2 of each claim, the word "further" should be stricken.

Regarding claim 23, in line 2, "the transmitted signal" should be replaced by --the received signal--, in line 4, "the at least three PN component" should be replaced by --at least three receive component--, in line 6, "the one of the at least three PN" should be replaced by --the provided one of at least three receive PN--, and, in line 7, "transmitted" should be replaced by --received--.

Regarding claim 24, in lines 7-8, "the at least three PN" should be replaced by --at least three receive PN--, in line 9, "at least three PN" should be replaced by --at least three receive PN--, in line 14, "three PN" should be replaced by --three receive PN--, in line 15, "the PN composite" should be replaced by --the receive PN composite--, in lines

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26-27, "correlated signal the transmitter delta phase and the" should be replaced by – correlated received signal, the transmitter delta phase, and the--, and, in line 31, "receiver" should be replaced by –receive--.

Regarding claim 25, in line 2, "at least three PN component" should be replaced by –at least three receive PN component--, in line 3, "the PN composite" should be replaced by –the receive PN composite--, in line 4, "MAND" should be defined in the claim and "three PN component" should be replaced by –three receive PN component--, and, in line 6, X, Y, Z<sub>1</sub>, and Z<sub>2</sub> should be defined in the claim.

Regarding claim 26, in line 2, "at least three PN component" should be replaced by –at least three receive PN component--, in line 3, "the PN composite" should be replaced by –the receive PN composite--, in line 4, "MAJ" should be defined in the claim and "three PN component" should be replaced by –three receive PN component--, and, in line 6, X, Y, Z<sub>1</sub>, and Z<sub>2</sub> should be defined in the claim.

Regarding claim 27, in line 2, "further" should be stricken, and, in line 3, "a crystal oscillator" should be replaced by –a receive crystal oscillatory--.

Regarding claim 28, in line 2, "further" should be stricken.

Regarding claim 29, in line 2, "receiver" should be replaced by –receive--, in line 3, "transmitter" should be replaced by –transmit--, in line 8, "moving the receiver generated PN code phases" should be replaced by –moving the phase of the at least three receive PN component codes--, in line 9, "the one receiver PN code" should be replaced by –a one receive PN component code--, in lines 12-13, "uncertainty range"

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should be replaced by --uncertainty chip range--, and, in line 13, "the one receiver PN code" should be replaced by --the one receive PN component code--.

Regarding claim 32, in line 2, "MAND" should be defined in the claim to be definite.

Regarding claim 33, in line 2, "MAJ" should be defined in the claim to be definite.

Regarding claim 35, in line 8, "output" should be replaced by --outputs--, and, in line 18, "signals are synchronized" should be replaced by --signals is synchronized--.

Regarding claim 36, in line 2, "further" should be stricken.

Regarding claim 37, in line 2, "further" should be stricken.

Regarding claim 38, in line 2, "further" should be stricken.

Regarding claim 47, in line 34, "the transmitted signal" should be replaced by --the received signal--.

Regarding claim 48, the claim should depend upon claim 47 rather than 38.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 8, 10, and 25-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, the claim is indefinite because one skilled in the art is unable to determine the meaning of "parts per part per year" as limited in lines 3-4.

Regarding claim 10, the claim is indefinite for the same reasons as applied to claim 8 above.

Regarding claim 24, the claim is indefinite because one skilled in the art is unable to find what is "determined" according to the claim limitations of lines 26-28. The claim recites that something is "determined" according to some parameters, but does not describe what is determined.

Regarding claims 25-29, the claims are rejected for being based upon a rejected parent claim.

#### ***Allowable Subject Matter***

7. Claims 1-7, 9, 11-24, and 30-48 are indicated to contain allowable subject matter.

8. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-7, 9, 11-24, and 30-48 are indicated to contain allowable subject matter because the prior art of record does not disclose or obviate a spread spectrum system having at least three pseudo-noise (PN) component code generators and first and second clock generators to aide in the synchronization of a composite PN code comprised of the at least three PN component codes wherein the second clock generator is adapted to synchronize with the first clock generator.

#### ***Conclusion***



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9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art of record is cited to show the state of the art with respect to composite PN code synchronization.

U.S. Pat. No. 3665472 to Kartchner et al.

U.S. Pat. No. 3728529 to Kartchner et al.

U.S. Pat. No. 4225935 to Zscheile et al.

U.S. Pat. No. 4638494 to Kartchner et al.

U.S. Pat. No. 4776012 to Zscheile et al.

U.S. Pat. No. 4809295 to Zscheile et al.

U.S. Pat. No. 5022049 to Abrahamson et al.

U.S. Pub. No. 2003/0108085 to Keller et al.

U.S. Pub. No. 2003/0161383 to Mower et al.

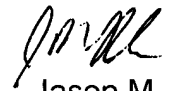
U.S. Pub. No. 2004/0047401 to Keller et al.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vanderpuye Kenneth can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason M. Perilla  
July 18, 2005

jmp



CHIEH M. FAN  
PRIMARY EXAMINER